

Incorporating Māori world views in the Rotorua geothermal system management plan

Tamara Mutu¹ and Penny Doorman²

¹Ngāti Hurungaterangi, Rotorua, New Zealand

² Bay of Plenty Regional Council, Whakatane, New Zealand

tamaramutu22@gmail.com and Penny.Doorman@boprc.govt.nz

Keywords: *Rotorua, geothermal, Māori, mātauranga, mauri, Te Arawa, system management plan*

ABSTRACT

Tangata whenua, the indigenous people of New Zealand have a long, unique and intergenerational relationship with geothermal. In Rotorua, ngā wai ariki (geothermal) remains central to everyday life and the wellbeing of tangata whenua.

However, colonisation, following the signing of Te Tiriti o Waitangi, set in motion legislative and social changes that have altered the way that geothermal is used and managed. Key to this was the Crown taking control of the formal management of the geothermal system, under various statutes. While customary practices continued, wider access to and use of geothermal was managed by the Crown, which compartmentalized and commodified the system.

In 1991 the Resource Management Act (RMA) signalled an intention to shift focus back towards sustainable management and the recognition of the relationship of Māori with geothermal. Since then, there has been ‘fine tuning’ of legislation, progress towards Treaty of Waitangi Settlements, building of case law on Māori rights and interests in geothermal, and growing awareness within central and local government of Te Ao Māori, a Māori world view.

The development of the Draft Rotorua Geothermal System Management Plan (SMP) by the Bay of Plenty Regional Council (Council) provides an opportunity to rethink the way the system is managed. The Draft SMP has been co-developed by the Council and tangata whenua, to embed the unique perspectives and mātauranga (knowledge) of tangata whenua; and to reflect the aspirations of tangata whenua. The opportunities are considerable, but this new approach also brings tensions and challenges for both Council and tangata whenua.

1. NGA WAI ARIKI O ROTORUA: ROTORUA GEOTHERMAL SYSTEM - THE TANGATA WHENUA WORLD VIEW

1.1 Ranginui and Papatūānuku

In tangata whenua traditions, they descend from Ranginui (the sky father) and Papatūānuku (the earth mother). All features of the natural world also descend from these first parents. In this way, tangata whenua are part of the same family as all parts of the environment and are connected through whakapapa (genealogy). This builds a worldview that is holistic and interconnected; it is not anthropocentric, as humans are the youngest part of the family. This history also imparts an obligation to look after the various aspects of the natural environment, as they are all members of the same family.

1.2 Te Hoata and Te Pupu

The origin of geothermal in the central north island of Aotearoa New Zealand begins with Ngātoroirangi. Ngātoroirangi was a tohunga who travelled from Hawaiki to Aotearoa on the Te Arawa waka (vessel). He travelled inland from the coast and journeyed to the snowy mountain peaks of Tongariro. There he was gripped by cold and near death. He called upon his sisters Kuiwai and Haungaroa in Hawaiki to send him fire for warmth. The sisters called on Te Hoata and Te Pupu, the subterranean goddesses of fire, to help their brother. The journey of Te Hoata and Te Pupu brought geothermal energy to Aotearoa. At each place where they surfaced, the geothermal energy also appeared from Whakaari, to Rotorua, Taupo and the Central Plateau. They created many different types of ngāwhā and waiariki (geothermal surface features), including chloride springs, mud pots, mud pools, mixed springs, fumaroles and sinter terraces. Finally, they reached Tongariro and surged through the mountain to warm Ngātoroirangi and restore him.

Ngā Waiariki o Rotorua, the Rotorua Geothermal System, has over 1800 ngāwhā, including some of New Zealand’s last remaining geysers, notably Pōhutu. These ngāwhā are taonga (treasures) and are most concentrated in areas of up-flow, around the villages of Ngāpuna, Whakarewarewa Valley, Ōhinemutu and Tārewa Pounamu (Kuirau). The people who live in these villages, the local people, are called haukāinga.

1.3 Customary relationships

Haukāinga have summarised their customary relationships with the geothermal system as a taonga-tuku-iho (treasures handed down from ancestors). They are a source of pride and cultural heritage - not a resource. Geothermal has always been used for communal benefit – for collective cultural, social and economic wellbeing. Some geothermal pools provided rongoā (medicine), some were used for bathing or healing. Other geothermal features were used for cooking or preparing important resources such as harakeke (flax). The connection to ngā wai ariki is a fundamental part of life and identity for haukāinga.

“The health and wellbeing of hau kāinga is directly linked to the health of geothermal taonga”

Conroy and Donald Consultants Ltd (2020).

Geothermal relationships and activities have shaped the ways of life for haukāinga for generations.

“These activities built whanaungatanga [kinship and family connection] amongst the people ... represent the tikanga [customs and protocols] which were enjoyed and passed down between generations ... we take our children to the land and pass on the stories and traditions of our ancestors ... the wellbeing of these features of our land is of paramount concern...”

2. MANAGEMENT OF NGA WAI ARIKI O ROTORUA: ROTORUA GEOTHERMAL SYSTEM

While the customary relationships of haukāinga are intergenerational, colonisation of New Zealand, following the signing of Te Tiriti o Waitangi (an agreement between the Crown and Māori), had huge consequences. The Crown took control of the management of the geothermal system, under various statutes, most recently the Resource Management Act (RMA). Bay of Plenty Regional Council (the Council) now manages the system, and allocates resources consents for use, under the RMA.

An indicative boundary of the system is shown in Figure 1. This boundary is based on the location of surface features, temperature contours, resistivity and where people are accessing the shallow part of the system using geothermal wells. This boundary is a management construct that does not fully reflect the traditional mātauranga (knowledge) about the connection of all geothermal systems in the Taupo Volcanic Zone described in 1.2 above.

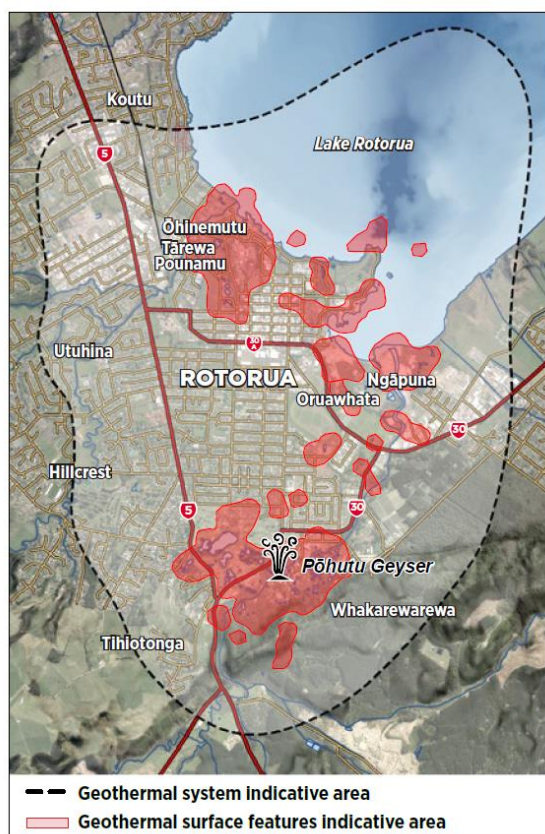


Figure 1: Indicative boundary of Nga Wai Ariki o Rotorua

2.1 Rotorua System Management Plan

The Council's policy document, the Bay of Plenty Regional Policy Statement (RPS), classifies all geothermal systems according to their use and values. The Rotorua Geothermal System is classified as a 'special purpose' system, where protection of significant surface features is a priority, and overrides extractive use.

Under the RMA, detailed policies for the use and development of the geothermal system sit within regional plans, which include rules for resource consents. The Rotorua Geothermal Regional Plan is now dated and is currently being reviewed. Regional plan reviews must follow a formal process laid out in Schedule 1 of the RMA.

Under the RPS the Council must also develop a SMP for certain systems, including the Rotorua Geothermal System. A SMP is a whole system integrated approach to management and is developed through a less formal process than a regional plan. The RPS does not limit the content or approach taken in the SMP, which provides flexibility to incorporate a Te Ao Māori view.

The SMP is being developed in advance of the regional plan review, and its broad approach will be reflected in the regional plan where appropriate.

2.2 Why incorporating a tangata whenua world view in the SMP is important

For Councils, reflecting the relationship of Māori with their taonga, and a Te Ao Māori view in policy is unquestionably the correct thing to do on many levels. At a fundamental level, the RMA requires councils take into account the principles of the Treaty of Waitangi which include, for example, the duty of active protection, and to act in partnership. Partnership in policy drafting and in management needs to be at the forefront of any review.

The Local Government Act 2002 (LGA) also places specific obligations on Councils to provide opportunities for Māori to contribute to decision-making. An example of this is building capacity and capability of Māori to contribute to and participate in planning processes.

More specifically the RMA requires Councils to consult iwi authorities when reviewing a regional plan and take into account any relevant iwi management plans. Recognising and providing for the relationship of Māori with their ancestral lands, water, sites etc., is considered a matter of national importance under the RMA, and anyone with responsibilities under the Act must have regard to kaitiakitanga, which broadly speaking includes guardianship, care and the wise management of resources. Tangata whenua are the hunga tiaki (guardians) of geothermal resources, so their involvement in decision making is a priority.

Council and tangata whenua therefore needed to work together to ensure that Council fulfilled its statutory obligations, and to enable tangata whenua to fulfill their obligations as hunga tiaki. With no template to follow, the unique local settings guided the approach.

2.4 Tangata whenua relationships

Tangata whenua relationships with Ngā Waiariki o Rotorua are diverse. At the primary level, the relationships are held by hapū – groups of whānau (families) sharing descent from a common ancestor. Hapū are each part of larger collectives called iwi. The different iwi in Rotorua are part of the wider confederation of tribes of Te Arawa.

In Rotorua, the hapū who have held their relationships with their land and geothermal since pre-European times, are from the villages of Ōhinemutu, Whakarewarewa, Tārewa Pounamu and Ngāpuna. These people are referred to as

haukāinga (the local people) or ‘ahi kā’. Ahi kā refers to the burning fires of occupation and represent a unique intergenerational relationship with Ngā Wai Ariki o Rotorua.

As well as ahi kā, there are many, complex layers of Māori interests in Rotorua e.g. iwi groups, land blocks, Treaty settlement groups (pre and post settlement). These groups have different rights and interests in geothermal. All these different groups hold different authority and views, and for Council it is important to engage with the correct entity, at the correct time, and in the correct manner. The law pushes Councils to engage specifically with certain entities, usually iwi, but this is not always consistent with the way things operate within Māori society. Nor is it always appropriate. Asking the people most affected by planning provisions how they want to be engaged at the outset is crucial.

2.3 Engagement approach

A starting point to achieve meaningful engagement and participation of tangata whenua in the Draft SMP development process, was to agree a preferred approach. To gauge this, hui (meetings) were held to inform, establish relationships and build knowledge. Feedback from the hui was that engagement must be genuine, not ‘token’, and that the authority of haukāinga (as distinct from iwi) must be acknowledged. The response from Council was to develop a multilayered engagement approach, including early engagement with Māori commercial entities, iwi, hapū and Māori landowners. The approach was endorsed by Council’s Māori Committee (Komiti Māori).

2.5 Te Ahi Kā Roa Rōpū

In a distinct change from traditional engagement, which is often limited to iwi entities, Council were asked to support the establishment of a haukāinga working group to give haukāinga a voice in the process of developing the Draft SMP. This is because haukāinga are otherwise not resourced to participate in Council processes. Also, resource management decisions are often more appropriately hapū or haukāinga (rather than iwi) based, as it is often hapū or haukāinga who hold mātauranga and are most affected by resource management decisions.

The working group that has been established is called Te Ahi Kā Roa Rōpū. The villages of Ngāpuna, Whakarewarewa, Ōhinemutu and Tārewa Pounamu selected representatives to participate in this working group. All hold mātauranga or knowledge and an understanding of tikanga or customary practices and connections with Ngā Wai Ariki o Rotorua. The Rōpū has provided a unique tangata whenua focus which was new to the Council planning process. The influence of the Rōpū in the review process has grown over time.

The establishment of the Rōpū does not take away from Council’s responsibility to also consult with iwi entities, and with the wider community. As previously noted by Te Ahi Kā Roa Rōpū:

“... establishing this group does not absolve Council of the obligation to consult with hapu, iwi and post settlement governance entities in relation to the review of the Rotorua Geothermal Regional Plan.”

Porter, S. et. al. (2020)

Nor are the members of the Rōpū a single source of truth, as they draw on expertise within their villages. To capture

haukāinga perspectives on the health or mauri of the geothermal system, the Ahi Kā Roa Rōpū prepared ‘Ngā Wai Ariki o Rotorua: He Kohikohinga’ (He Kohikohinga). This report describes the haukāinga connections with Ngā Wai Ariki, the ongoing use, their loss of access, and the connection of the health of the geothermal system with the health and wellbeing of people. The report received some funding support from the Council. While led by the Rōpū, Council staff were invited to join the Rōpū on hīkoi (journeys) to visit their ngāwhā, building understanding and trust. He Kohikohinga provided a solid foundation on which to build the Draft SMP.

3. CHALLENGES AND OPPORTUNITIES OF INCORPORATING MĀORI WORLD VIEWS

With the background of the Council’s intention to ensure meaningful tangata whenua participation in the development of the Draft SMP, the establishment of Te Ahi Kā Roa Rōpū, and completion of ‘He Kohikohinga’, the next stage was for the Council and the Rōpū to draft the SMP together. This section explores some of the key challenges and opportunities of this drafting process, particularly while incorporating Māori world views.

3.1 No single haukāinga perspective

The Ahi Kā Roa Rōpū is a collective of haukāinga – four different villages. Each village has different hapū and iwi affiliations, and different whakapapa, histories, contemporary realities and aspirations. There is no single shared world view amongst these four haukāinga groups, although there are some commonalities.

In order to provide for engagement and participation of each haukāinga group, space was needed to acknowledge the differences and distinct identities. Discussions within the Te Ahi Kā Roa Rōpū have respectfully accommodated these differences. The Draft SMP sets out the history and detail of each village separately (written by haukāinga) without a requirement to create a single, uniform view for the haukāinga. If a single view was pursued, for simplicity for example, that would be contrary to the intention to enable genuine participation.

3.2 Mātauranga

Mātauranga is the knowledge and knowledge systems developed by tangata whenua. It is often developed and passed down over generations of observations and lived experiences. It comes from the specific world view of tangata whenua and as such it encompasses tikanga (customs and protocols), kawa (rules) and Māori principles. In the Rotorua geothermal context, it includes inter-generational knowledge and relationships with the various geothermal features. Each haukāinga has unique mātauranga.

However, this rich knowledge has not been reflected in policy or used to guide management of the geothermal system. Council has relied heavily on mainstream science, and most of the monitoring and modelling is heavily weighted towards physical attributes. Decision making is therefore skewed towards these value sets, and wider cultural knowledge and understanding are disregarded or underrepresented. This disparity is evident in the Bay of Plenty Regional Council’s surface feature monitoring programme which focusses on physical attributes, such as temperature, chemistry, and flow as an indicator of system health.

The Draft SMP will look to incorporate mātauranga. He Kohikohinga (see section 2.4 above) provides a different, mātauranga-based perspective on system health and is an important part of the evidence base for the Draft SMP. For example, the expression of loss of connection, and inequity was a strong theme in He Kohikohinga, and some of the actions in the Draft SMP attempt to address this.

Even so, the incorporation of Māori values is difficult, because mātauranga is often communicated indirectly through stories, song or experiences. It is also often intangible and qualitative (Taute et al, 2022). A risk is that Council tries to ‘deconstruct’ hau-kainga contributions, to explain them and to make them fit in a planning framework. In an effort to protect against this, the Draft SMP signals the need for Council to support and empower haukāinga to continue contributing their observations on the system’s health to assist decision making. Key tools are a mātauranga monitoring programme and consent processes that ensure input from haukāinga for activities that may affect their customary practices. Another tool is the new joint Governance Group to oversee implementation of the Draft SMP which will ensure greater parity between mātauranga and empirical science in management.

For haukāinga, the sharing of mātauranga comes with a responsibility to ensure that it is protected, particularly culturally sensitive information. The Rōpū have stressed that mātauranga is not to be used by Council to ‘tick a box’. Nor should Council try and integrate or align mātauranga Māori with mainstream science. These knowledge systems are different and should be treated as such to maintain their integrity and value. Not all knowledge will be disclosed and incorporated into Council processes, nor will it need to be. There will however be new issues to tackle about what mātauranga is appropriate to share with Council, who can make those decisions and how data sovereignty is maintained.

3.3 The Vision of the Draft SMP: Mauri

A key challenge in incorporating Māori world views in the Draft SMP has been the translation and explanation of Māoritanga (Māori culture, way of life) into a planning document which is based in a very different world view. A good example of this challenge is the concept of ‘mauri’.

Council processes tend to compartmentalise the environment, to explain and interpret connections and complex problems. This is at odds with the haukāinga view which takes a holistic approach, based on the deep, whakapapa connection between the environment and people (see section 1.1).

The Draft SMP has therefore been developed as a ‘care plan’, a whole system and integrated approach to the sustainable management of the system, for the wellbeing of the geothermal system, the community and for future generations.

This led to the overarching vision in the Draft SMP:

Ka ora te mauri o ngā waiariki

The Rotorua Geothermal System is healthy.

It was difficult to capture the full meaning of ‘mauri’ in the Draft SMP. In English it has been translated to mean

healthy. However, in Māori it encompasses many different aspects of health and essentially recognises the geothermal system as being alive.

It is important that this vision is understandable by the whole community. We also need to be able to measure progress towards this vision, through a common understanding and indicators of success, including qualitative indicators that reflect Māori values.

The solution of how to explain mauri was provided by Rukingi Haupapa, a member of the Ahi Kā Roa Rōpū. He provided the model below which is a Te Arawa description of mauri. The model was explained by John Vercoe to Rotorua Hospital and is equally applicable in the SMP. The key aspects of this explanation of mauri are that it looks beyond the tinana/ physical wellbeing of the geothermal system, to also encompass the hinengaro/mind and heart and wairua/spiritual aspects of mauri.

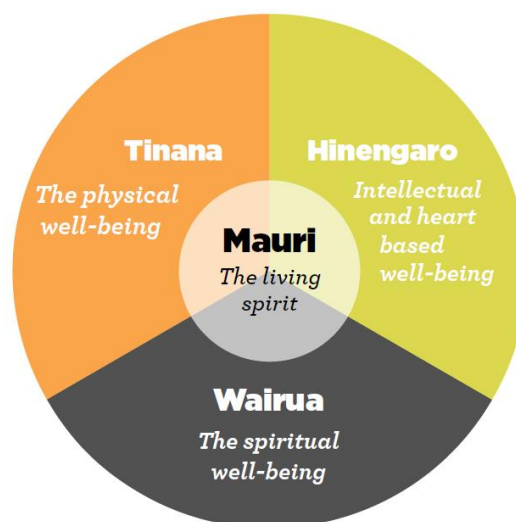


Figure 2: A Te Arawa philosophy of being well

The SMP elaborates on this concept with the following descriptions:

- *The tinana of a healthy geothermal system much like a human body has veins, that instead of blood has geothermal waters flowing through them. When healthy, the system expels energy ‘sweats’ in the form of geysers and eruptions and like breath on a cool day has plumes of steam escaping from its body.*
- *The hinengaro of a geothermal system when under attack protects what it can at the expense of other parts of its body and will shield the “heart” to protect vital organs.*
- *And finally, if the wairua or the spirit of a geothermal system isn’t protected, we see illness both internally and externally. We may see parts of its body slowly change and weaken, such as, less energy expelled from ngāwhā or in a worst-case scenario death, similar to some of the geysers and pools that have never returned*

to live within our Rotorua geothermal system, their veins collapsed with no water running through them.

Bay of Plenty Regional Council (2023)

3.4 Principles in the Draft SMP

To incorporate tangata whenua views, the Draft SMP has moved away from commodifying the system, and managing it as a resource, to focussing on the way that people behave. From this the Draft SMP evolved into a 'care plan'. To complement the vision, a suite of Mātāpono or Principles are included to outline an agreed way to behave:

- Partnership
- Interconnectedness
- Sustainability, balance and reciprocity
- Intergenerational relationships
- Collective knowledge
- Fairness and equity
- Responsiveness and adaptiveness

These principles are difficult to apply in a traditional policy sense. However, they signal the values that underlie the management approach and the steps that will be taken to achieve the vision. Under each broad management approach shown in Figure 2, there are a number of key actions to embed Te Ao Māori into management, with a focus on mātauranga, partnership, protection of customary practices and value-based decision making.



Figure 3: The Broad Management Framework

By way of example, Values-Based Allocation reflects the principle of fairness and equity, with the intent to address the current imbalance in allocation that is heavily weighted towards commercial interests. Specific actions include prioritisation of use, with customary and communal uses prioritised over commercial uses. This challenges the 'first in first served' premise of the RMA, so will be complex to implement, but is an opportunity to redress inequity.

Another example is Protecting the Health of the Geothermal Aquifer, which reflects the values of reciprocity, balance and sustainability. This includes the idea of a 'safe operating space', where the taonga is protected by keeping the geothermal aquifer healthy through allocation limits.

3.4 Ability to participate

Lack of capacity and capability of Māori to participate in Government processes is well documented. This has led to legislative changes to direct Councils to provide support to iwi and hapū. The Draft SMP development process has been a lengthy and in-depth process, taking place over many years, so this has been a particular challenge.

Haukāinga participation is often in their own time, and those with the necessary knowledge to contribute can be heavily leaned on. Representatives must also feedback to their communities and monitor whether haukāinga views have been 'watered down' or lost through planning processes. Sometimes hapū reporting processes are not well suited to this kind of reporting. Representatives also risk being associated with Government processes, so must rely on the trust of their communities and on their personal strength, integrity, and mana.

Council offers an honorarium for the Ahi Kā Roa Rōpū members to attend meetings. Additional payments may be made for extra work beyond the meeting attendance, preparation and actions. However, for the Rōpū, payment does not always reflect the true cost of their participation, and for Council the costs are substantial. It is therefore important to be clear of the scope of work, to mutually agree expectations for payment early in the process, and to ensure parity between Māori and other expertise drawn on in the development of the Draft SMP. Project management of the planning process needs to appropriately provide for these aspects of the budget.

Building capability also takes time. Not all haukāinga are familiar with planning process, and not all Council staff are proficient in Te Ao Māori, so a starting point was building understanding across the team working together. This means sharing knowledge from a place of trust. It is stressed that the commitment to embed a haukāinga perspective in the Draft SMP is a mutual commitment to a long term, challenging process.

3.5 Overarching Crown framework

Early in the SMP development process, tangata whenua expressed concern about engaging on a new regulatory plan, without past Treaty grievances being fully addressed, or Māori rights and interests in geothermal being determined. Half of the haukāinga groups in this process have not yet reached comprehensive settlements with the Crown for their historic Treaty of Waitangi claims. Some specific claims about the loss of geothermal resources remain unresolved. For the haukāinga, this is a critical point.

This issue was extremely difficult for Council to navigate. Regional councils do not influence Crown Treaty Settlements and it was beyond the scope of a plan process to address fundamental constitutional matters such as resource ownership. However, tangata whenua expressed concern that participating in the Draft SMP process could be seen as conceding to, or legitimising, Council control of the

geothermal resource. For some people, this led to a reluctance to participate.

Tangata whenua also saw the outcome of the Draft SMP as preconceived, as the starting point was a Council policy document i.e., the RPS, and the motivation was RMA driven. Taute et al (2022) point to the risk that Council processes can be ‘a platform from which Māori must challenge preconceived notions’, rather than build new solutions.

Committing to co-development of the draft SMP was one way of trying to address this issue and to build trust in the process. However, the question of who holds ultimate decision-making power to approve and implement the final Draft SMP remained. While not yet fully resolved, some key steps proposed in the draft are:

- The establishment of a joint panel (Council and haukāinga representatives) to hear and consider feedback on the Draft SMP, and make recommendations to full Council prior to its final adoption;
- The establishment of a joint Governance Group, with Council and Māori representation, to oversee implementation of the SMP;
- Acknowledgement of the Treaty Settlement Process; and
- Signalling haukāinga aspirations for the future transfer of Council’s geothermal functions to iwi and/or haukāinga.

For Council these changes are significant, and potentially contentious. For tangata whenua, this is only a step towards self-determination. This has meant conceding (albeit reluctantly in some cases) that immediate change in all areas of management may not yet be possible. However, the Draft SMP signals a road map towards further change and a growing partnership.

4. CONCLUSION

The development of the Draft Rotorua SMP has presented a rare opportunity to reflect on relationships with the geothermal system, and to rethink the management approach. The traditional, rigid policy style that might be expected has been influenced by the tangata whenua lens, guided by haukāinga through a partnership approach.

The outcome of the SMP is yet to be decided, but the Draft encapsulates key concepts such as mauri, values-based allocation, and the place of mātauranga in managing the system. A new governance structure to enable tangata whenua contribution to decision making is also proposed.

There have been challenges to get to this point, for both Council and tangata whenua. Meeting the needs of a Council planning document has had to be balanced with the aspirations of tangata whenua. Some of these tensions remain unresolved and we expect that the legal and cultural landscape will continue to evolve. However, the Draft SMP has put in place a framework to respond to that change together.

ACKNOWLEDGEMENTS

The haukāinga of Ōhinemutu, Whakarewarewa, Tārewa Pounamu and Ngāpuna, whose histories, relationships and voices are the driving force for this work.

Te Rotorua Ahi Kā Roa Rōpū, past and present, who have worked tirelessly and with passion for the protection of Ngā Wai Ariki o Rotorua, and to protect and enhance the relationship of their people with these taonga. (NB: this paper is presented by Tamara Mutu as one member of the Ahi Kā Roa Rōpū and represents her views, rather than the views of the whole group.)

Bay of Plenty Regional Council staff who have contributed to the development of the Draft SMP, in particular Freya Camburn and Rawiri Bhana for supporting and nurturing the Ahi Kā Roa Rōpū process.

Elva Conroy for foundational contributions and helping to distil the varied feedback on haukāinga values and relationships.

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